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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,353	10/07/2003	Takayuki Ito	26A-011	3849

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EXAMINER	
STAICOVICI, STEFAN	

ART UNIT	PAPER NUMBER
1732	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

Office Action Summary	Application No.	Applicant(s)
	10/679,353	ITO ET AL.
	Examiner	Art Unit
	Stefan Staicovici	1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,8 and 11-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 8 and 11-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicants' amendment filed November 13, 2006 has been entered. Claims 1-2, 8 and 11-13 are pending in the instant application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 8 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA) in view of Kimura *et al.* (US Patent No. 5,531,950) and in further view of Ruble, III (US Patent No. 5,956,925) and Garrett (US Patent No. 6,326,338 B1).

APA teaches the basic claimed process for making an insert molded vehicle steering wheel (see page 1, lines 17-19 of the original disclosure) including, providing a machined core (it is submitted that a machined core includes a step of machining), placing said core in a mold, lowering the pressure in said mold, injecting a mold coating solution, bringing said mold coating solution to a boil such that a coating is formed onto said mold and injecting a resin to form said insert molded product (see page 1, line 29 through page 2, line 3 of the original disclosure).

Regarding claims 1 and 13, APA does not teach cleaning the core prior to insert molding. However, cleaning a preform (insert/core) prior to insert-molding is well known as evidenced by Kimura *et al.* ('950) who teach a process of making an insert molded product including, providing a metallic insert member, cleaning said insert member of oil, grease and other impurities (swarf, machining assistant), drying said insert member, placing said insert member in a mold and injection molding a thermoplastic resin about said insert to form said insert molded product (see col. 4, lines 29-43; col. 6, lines 15-28; col. 7, lines 11-32). Therefore, it would have been obvious for one of ordinary skill in the art to have cleaned the core/insert as taught by Kimura *et al.* ('950) prior to molding in the process of APA because of known advantages that cleaning provides such as improved mechanical characteristics, reduced corrosion and improved aesthetics by reducing air bubbles and blemishes.

Further regarding claims 1 and 13, although Kimura *et al.* ('950) teach a ultrasonic cleaning agent tank (see col. 6, lines 21-27), APA in view of Kimura *et al.* ('950) do not teach injecting said cleaning agent from a plurality of nozzles arranged about said insert member or blowing air for drying. However, the use of a plurality of cleaning nozzles placed about a part to be cleaned that inject cleaning agent is well known as evidenced by Ruble, III ('925) who teaches a system for cleaning a component including, providing a plurality of nozzles positioned about a component (positioned above and below) to be cleaned and injecting a cleaning agent through said nozzles (see col. 5, line 55 through col. 6, line 10). Further, it is noted that blowing air to dry an object is well known as evidenced by Ruble, III ('925) who teaches a system for cleaning a component including, providing a drying station (84) where components are subjected to drying air in the form of heated air jets (blowing air) (see co. 6, lines 10-18). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a cleaning system including a plurality of jets and a drying system as taught by Ruble, III ('925) to inject a cleaning agent in the process of APA in view of Kimura *et al.* ('950) because of known advantages such as increased cleaning action and also because, Kimura *et al.* ('950) teach an ultrasonic cleaning agent tank, hence suggesting the use of the high pressure cleaning system of Ruble, III ('925). Further, it would have been obvious for one of ordinary skill in the art to provide the drying system of Ruble, III ('925) in the process of APA in view of Kimura *et al.* ('950) because of known advantages that drying provides such as reducing moisture prior to insert molding, hence reducing the formation of bubbles and as such, providing for an improved molded product.

Further regarding claims 1 and 13, Kimura *et al.* ('950) teaches the use of both water and a solvent in treating the insert (see col. 4, lines 29-43). Kimura *et al.* ('950) also teach cleaning said insert member of oil, grease and *other impurities* (swarf, machining assistant) (emphasis added). It is noted that because APA teaches providing a machined core, it is submitted that a machined core includes a step of machining, and as such requires a machine assistant. Further, it is noted that using water to clean an object is notoriously well known. Furthermore, it is noted that a water based machining assistant (the machine assistant has a high affinity for water) is well known as evidenced by Garrett ('338) who teaches the advantageous use of water-based machine assistant (the machine assistant has a high affinity for water) (see col. 1, lines 32-45). Therefore, it would have been obvious for one of ordinary skill in the art to use a water-based machine assistant as taught by Garrett ('338) in the process of APA in view of Kimura *et al.* ('950) and in further view of Ruble, III ('925) because of known advantages such as reduced cost and availability and, the known use of water as a cleaning agent.

In regard to claim 2, APA teaches lowering the pressure in said mold, injecting a mold coating solution, bringing said mold coating solution to a boil such that a coating is formed onto said mold and then injecting a resin to form said insert molded product (see page 1, line 29 through page 2, line 3 of the original disclosure).

Specifically regarding claim 8, because APA in view of Kimura *et al.* ('950) and in further view of Ruble, III ('925) teach injecting a cleaning agent, it is submitted that said cleaning agent is injected at a predetermined pressure in the process of APA in view of Kimura *et al.* ('950) and in further view of Ruble, III ('925) in order for injection to occur as described.

Regarding claim 12, APA teaches that the core is for a vehicle steering wheel (see page 1, lines 17-19 of the original disclosure).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA) in view of Kimura *et al.* (US Patent No. 5,531,950) and in further view of Ruble, III (US Patent No. 5,956,925), Garrett (US Patent No. 6,326,338 B1) and Tuominen (US Patent No. 5,051,136).

APA in view of Kimura *et al.* ('950) and in further view of Ruble, III ('925) and Garrett ('338) teach the basic claimed process as described above.

Regarding claim 11, although APA in view of Kimura *et al.* ('950) and in further view of Ruble, III ('925) and Garrett ('338) teach using water as part of the cleaning process, APA in view of Kimura *et al.* ('950) and in further view of Ruble, III ('925) and Garrett ('338) do not teach providing steam. Tuominen ('136) teach a cleaning process including, providing steam for cleaning after a rinsing step using water (see Abstract). It is submitted that steam is at a temperature that is higher than room temperature (ordinary temperature). Therefore, it would have been obvious for one of ordinary skill in the art to have provided steam as a cleaning agent as taught by Tuominen ('136) in the process of APA in view of Kimura *et al.* ('950) and in further view of Ruble, III ('925) and Garrett ('338) because Tuominen ('136) specifically teaches that steam provides for an improved cleaning agent by reducing the use of solvents and eliminating the need of a drying step, hence providing for an improved cleaning process.

Response to Arguments

5. Applicant's arguments filed November 13, 2006 have been considered.

6. In response to applicant's arguments against the teachings of Kimura *et al.* ('950) and Ruble, III ('925) individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

7. Applicants argue that the art of record does not teach or suggest removing the cleaning agent form the insert member by blowing air (see pages 8-9 of the amendment filed 1/13/2006). However, as shown above, blowing air to dry an object is well known as evidenced by Ruble, III ('925) who teaches a system for cleaning a component including, providing a drying station (84) where components are subjected to drying air in the form of heated air jets (blowing air) (see co. 6, lines 10-18). Further, it is noted that, "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." See MPEP §2145(III), citing, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In this case, the teachings of Kimura *et al.* ('950) were used to show that it is known to clean an insert prior to insert molding and also to show that drying is

an integral part of the cleaning process. The teachings of Ruble, III ('925) were used to merely show that blowing air to dry a component in a cleaning process is well known.

8. In response to applicant's argument that Tuominen ('136) is nonanalogous art (see page 9 of the amendment filed 11/13/2006), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Tuominen ('136) teaches a cleaning process (see Abstract). Hence, it is submitted that Tuominen ('136) is reasonably pertinent to the particular problem with which the applicant was concerned.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD
Stefan Staicovici 2/6/07
Primary Examiner

AU 1732

February 6, 2007